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ABSTRACT

In this study, nutrition therapy was found to be an important variable in the successful treatment of alcoholism. Traditional treatment methods, such as psychological and institutional approaches, social and group therapy, and chemotherapy, are noted. Research on nutritional needs of individuals has led to an orthomolecular concept which holds that each person has unique inherited biological needs. Orthomolecular treatment strives to attain the optimum concentration of all nutrients needed by the body, particularly the brain. The literature on this treatment indicates a 25 percent rate of recidivism, while traditional methods report a 65 to 75 percent rate of recidivism. For this study, a control group of rehabilitation patients received psychotherapy treatments, and an experimental group received both nutritional therapy and psychotherapy. The nutritional therapy consisted of: (1) diet modification; (2) vitamin and mineral supplements; and (3) nutrition education. One month after the treatment, no significant differences between the two groups were found in psychological, medical, and self help tests. However, six months after the treatment, 81 percent of the experimental group reported that they were not drinking, compared to 38 percent of the control group. A combination of psychotherapy and orthomolecular therapy shows promise of success far above that which is currently experienced using traditional methodology. If rehabilitation is to be effective, the physiological basis of antisocial behavior must be recognized. (FG)

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THE EFFECT OF NUTRITIONAL THERAPY ON REHABILITATION OF ALCOHOLICS

Ruth M. Guenther, Ph.D.

Paper presented at the Annual Meeting of the Southwest Educational Research Association (Dallas, Texas, 1981).

1.0 INTRODUCTION

Alcoholism and alcohol abuse represent a staggering drain on the economy of our country. Approximately ten percent of our work force are alcoholics (Keller and Rosenberg, 1973), representing a $19.6 billion annual loss in production (Hamilton, 1980). Alcohol related crimes make up the largest single category of crime, accounting for 30% of all arrests in Texas last year (Smith, 1980). Alcoholism is a major factor in highway deaths. Cirrhosis of the liver ranks seventh among leading causes of death (Lieber, 1976). An even more insidious threat has been largely ignored until recently. Future generations are threatened by fetal alcohol syndrome which may be caused by consumption of as little as three ounces of alcohol per day by pregnant women. Much smaller amounts may cause the more frequent abnormalities classified as minimum brain dysfunction (Witti, 1977). Alcohol is a growing problem among our young school age population. All factors considered, the effects of alcoholism may be even greater than generally suspected. Therefore the subject deserves intensive study.

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2.0 ALCOHOLISM -- CAUSES AND TREATMENTS

Alcoholism has been generally accepted as a disease. However, there are no clear criteria for defining alcoholism. A central assumption is the loss of control phenomenon with accompanying excessive and involuntary drinking. Curiously, if alcoholism is truly a disease, it is the only disease for which the patient is commonly referred by physicians for treatment to a lay organization, that is, Alcoholics Anonymous (Williams, 1971).

2.1 Traditional Concepts

Many theories for the cause of alcoholism have arisen. Major current theories can be generally classified as either sociological or psychological. Labeling is an example of a sociological theory. This theory proposes that once a person is labeled as a deviant (for example, an alcoholic) the person is forced into a sub-culture of similar deviants (in this case, a sub-group of drinking partners) (Gove, 1970). An example of a psychological theory is learning theory. Within the framework of this theory, drinking may be an adaptive response to unsuccessful attempts to attain valued goals (Rotter, 1966). None of these traditional theories seem to be able to explain why one person becomes an alcoholic whereas another person under similar circumstances does not become an alcoholic.

Traditional treatments for alcoholism take many forms corresponding to the numerous theories as to the cause of this

disease. Treatment modalities can generally be divided into four main categories: (1) psychological treatment, (2) institutional treatment, (3) social and group therapy such as Alcoholics Anonymous, and (4) chemotherapy such as tranquilizers and Antabuse. Most traditional treatment methods consist of some combination of these four categories. Differences in treatment do not appear to significantly affect long-term outlook (Emrick, 1975; Bean and Karasievich, 1975; Mosher, Mulligan, and Iber, 1975). Recidivism rates appear to run 65% - 75% depending on which studies one reads about.

2.2 Orthomolecular Concept

Roger Williams of the Clayton Foundation Biochemical Institute at The University of Texas at Austin has postulated that basic nutritional needs of an organism are inherited. The crucial concept is that each person has a unique, innate, and highly distinctive biochemical individuality. Nutritional needs among individuals may vary as much as 100 fold to 1000 fold. Dr. Williams believes that alcoholics have unmet nutritional needs prior to becoming alcoholic, predisposing them to alcoholism. In addition, environment may also be influential; emotional or psychological stress can alter one's biochemistry (Williams, 1959, 1967, 1971, 1977). Williams theory, in contrast to traditional theories, explains why one person can become an alcoholic while another in similar circumstances may not. It is not the circumstance that causes the alcoholism but the

uniqueness of the individual's innate biochemistry or biochemical response to the circumstance that is crucial to the alcoholism.

Out of Williams and other biochemical theories has grown the concept of orthomolecular treatment. This treatment seeks to restore the biochemical balance in the body by nutritional methods, including the use of vitamin and mineral supplements according to individual needs. Ideally, orthomolecular treatment strives to attain the optimum concentration of all nutrients needed by the body, particularly the brain. The fact that there is no barrier between the body and the brain is frequently overlooked. Behavior cannot be considered as a separate entity from the condition of the physical body.

Orthomolecular treatment was introduced in 1952 as a treatment for schizophrenia. Since that time it has been used in a variety of treatment situations with astonishing success. As a treatment for alcoholism, the literature on orthomolecular treatment indicates recovery rates of 75% (i.e. recividism rates of 25%) in stark contrast to the 65% - 75% recividism rates reported from traditional treatment methods. My own study, which I will describe next, attained a recovery rate of 81%.

3.0 A DESCRIPTION OF THE STUDY

My study on the effects of nutrition on recovery from alcoholism focused on differences in effectiveness between two treatments

for alcoholism -- one in which a Control Group received only psychotherapy and the second in which an Experimental Group received nutritional therapy in addition to psychotherapy.

Specifically, there were two hypotheses. My first hypothesis was that an Experimental Group would show significantly greater reduction in anxiety and depression and significantly improved health compared to a Control Group at the time of discharge. My second hypothesis was that the Experimental Group would show a significantly higher number of discharged patients maintaining sobriety compared to a Control Group six months after discharge.

3.1 Methodology

The major categories of dependent variables studied were psychological variables, health variables, and sobriety. Psychological variables were anxiety and depression as measured by the Taylor Manifest Anxiety Scale and the Depression Scale of the MMPI. Health variables were a medical self-report and laboratory tests. Sobriety was measured by ascertaining drinking status during the six months following discharge.

Nutritional therapy included the following three components: (1) diet modifications, (2) vitamin and mineral supplements, (3) nutrition education. In an applied setting, orthomolecular therapy has generally meant megavitamin therapy using a restricted number of vitamins and minerals and a

hypoglycemia-controlling diet, that is, a high protein, low carbohydrate diet with no refined sugar. However, this restricted use of supplements may be an oversimplified response to a more generally disordered metabolism (Currier in Watson, 1974). Therefore, the vitamins and minerals contained in the supplements used in my study were at a much lower level compared to most reported orthomolecular treatments but a more complete vitamin/mineral supplement was used. No modification in the direction of a hypoglycemia- controlling diet was made. Instead, the impetus was toward more complex carbohydrates in the diet obtained by adding wheat germ and bran, using whole wheat bread, and having snacks of nuts, cheese, fruit juices, and milk available. In addition, caffeine and sugar were eliminated where possible.

Since one of the goals of nutritional rehabilitation is to modify eating habits, nutrition education in the form of informal discussion and supplemental reading was incorporated into the study.

The study was conducted at a Veterans Administration Medical Center in Texas. Participating in the study were 107 male patients admitted to the Alcoholic Rehabilitation Unit (ARU). The first 50 patients who gave informed consent and who completed the program were the Control Group. After all Control Group patients were discharged, the next 57 patients who gave informed consent and who finished the program were the Experimental Group.

Patients in the Control Group followed the ARU rehabilitation program. Patients in the Experimental Group also followed the ARU rehabilitation program, but in addition received the nutritional therapy as previously described. In addition, these patients agreed to maintain recommended diet and vitamin/mineral supplements for a six-month follow-up period. A supply of supplements was made available to them.

Pretests were administered shortly after patients entered the ARU and posttests were administered shortly before patients were discharged. After discharge, three telephone calls were made at one, three, and six month intervals to each patient to monitor their drinking. Each patient was interviewed and as much background data as possible was gathered.

3.2 Results

Data analyses performed on demographic variables indicated that the two groups were quite similar when they entered the ARU. Statistical control for differences on entering pretest scores was accomplished through use of analysis of covariance, after first ascertaining that there was a linear relationship between corresponding pretest and posttest scores and that the regression coefficients for both groups were approximately equal on corresponding tests.

The results of the data analyses indicated that the first

hypothesis was not supported. There were no significant differences on psychological tests, medical self-report, or laboratory tests. One possible reason for the lack of significant results was that there was only 35 days on the average between pre- and posttests.

Far more importantly, however, the second hypothesis was supported. Six months after discharge, 81% of the Experimental Group patients reported they were not drinking whereas only 38% of the Control Group reported that they were not drinking. This represents a statistically significant difference ($p < .001$) between the proportions of the two groups. I must emphasize that these results were not based solely on telephone self-report. The ARU sponsors an Aftercare Program. By means of this program, the ARU counselors maintain very close contact with most of the discharged patients many of whom obtain jobs in the area. The drinking status of all patients was confirmed by the ARU counselors before the results were computed.

3.3 Conclusions

The results of the study give strong support to the theory that relates alcoholism to biochemical deficiencies. Improved nutrition and nutrition education appeared to have prevented resumption of drinking on the part of a large number of the Experimental Group for the six months of the follow-up period. Patients also reported an improved sense of well-being and

outlook. Because nutritional needs are unique, it was possible that the nutritional needs of some of the patients in this Group were not met, with the result that some few of them resumed drinking shortly after discharge. If this is true, then the fault lies not with the underlying theory which recognizes the uniqueness of nutritional needs but with the invariance of treatment inherent in the quasi-experimental design approach used in psychological research.

4.0 IMPLICATIONS FOR THE FUTURE

As mentioned in the introduction, alcoholics make up a large segment of our criminal and delinquent population. It is crucial to recognize that the notion of underlying biochemical deficiencies as a cause of antisocial behavior is the key to prevention as well as treatment. In other words, the problems of antisocial behavior in the myriad of ways in which it may be manifested could well be addressed by attention to optimizing nutrition, particularly for susceptible persons.

If you will, consider the relationship between criminal behavior and other forms of antisocial behavior such as disrupting the classroom, truancy, vagrancy, vandalism, and ithe growing use of alcohol and drugs by young children. Cannot these benaviors be viewed as a continuum? Alexander Schauss, who has spent many years observing the relationship between diet and criminal recividism as a probation officer with both juveniles and adults,

stated that in his opinion probably 50% of all criminals eat their way into prison (Mobley, 1980).

Have you ever seen a child hyperactive on sugar? Have you ever seen a hypoglycemic person depressed to the point of being suicidal? Have you ever seen a person allergic to some food become psychotic and violent after eating only a small amount of the offending substance? Nutritional deficiencies may be implicated in behavorial disorders that cover the gamut from children with learning difficulties to alcoholics, drug abusers, and even hardened criminals. If we as an educational research group seriously wish to address the growing problem of antisocial behavior that we are witnessing both within and without our schools, we must begin to incorporate nutritional therapy into our prevention and treatment strategies.

A combination of psychotherapy and orthomolecular therapy shows promise of success far above that which is currently experienced using traditional methodology. If rehabilitation is to be effective, the physiological basis of antisocial behavior must be recognized.

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